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FIG.1A

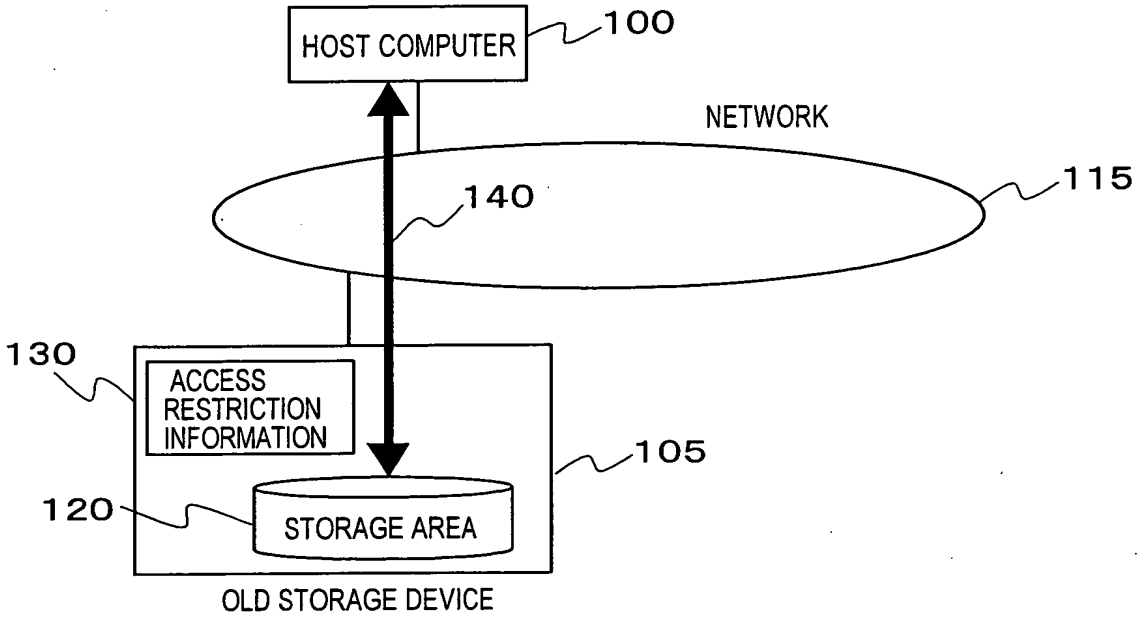

FIG.1B

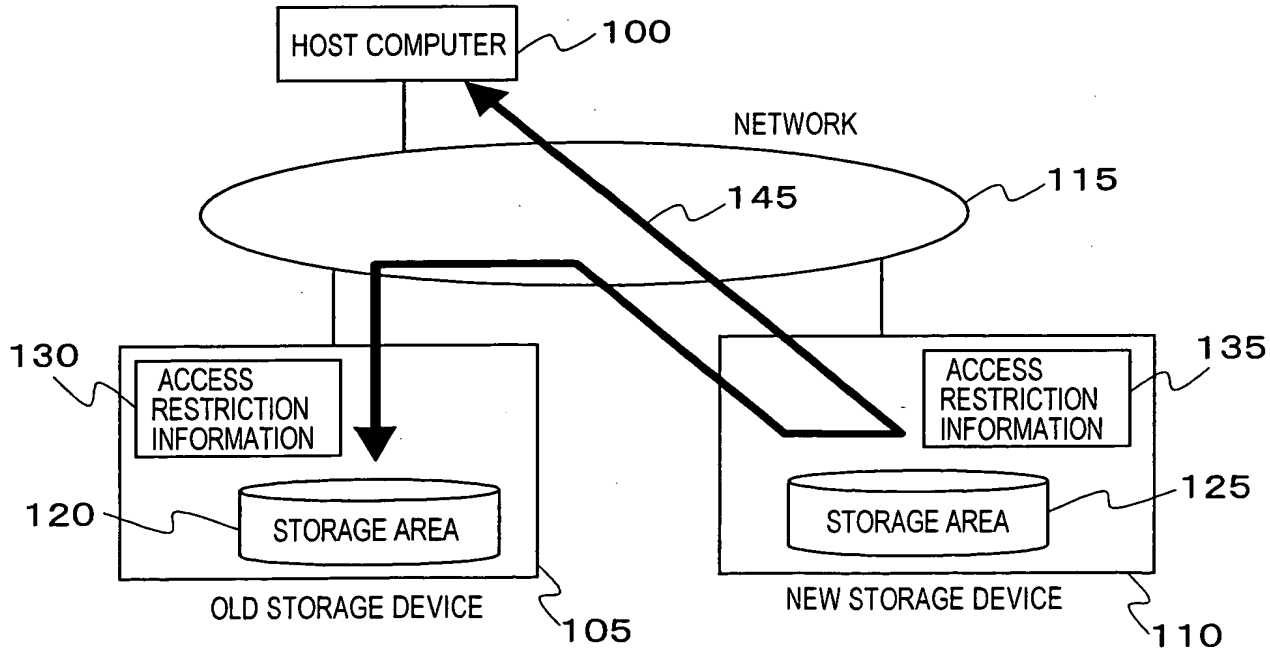

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FIG.2

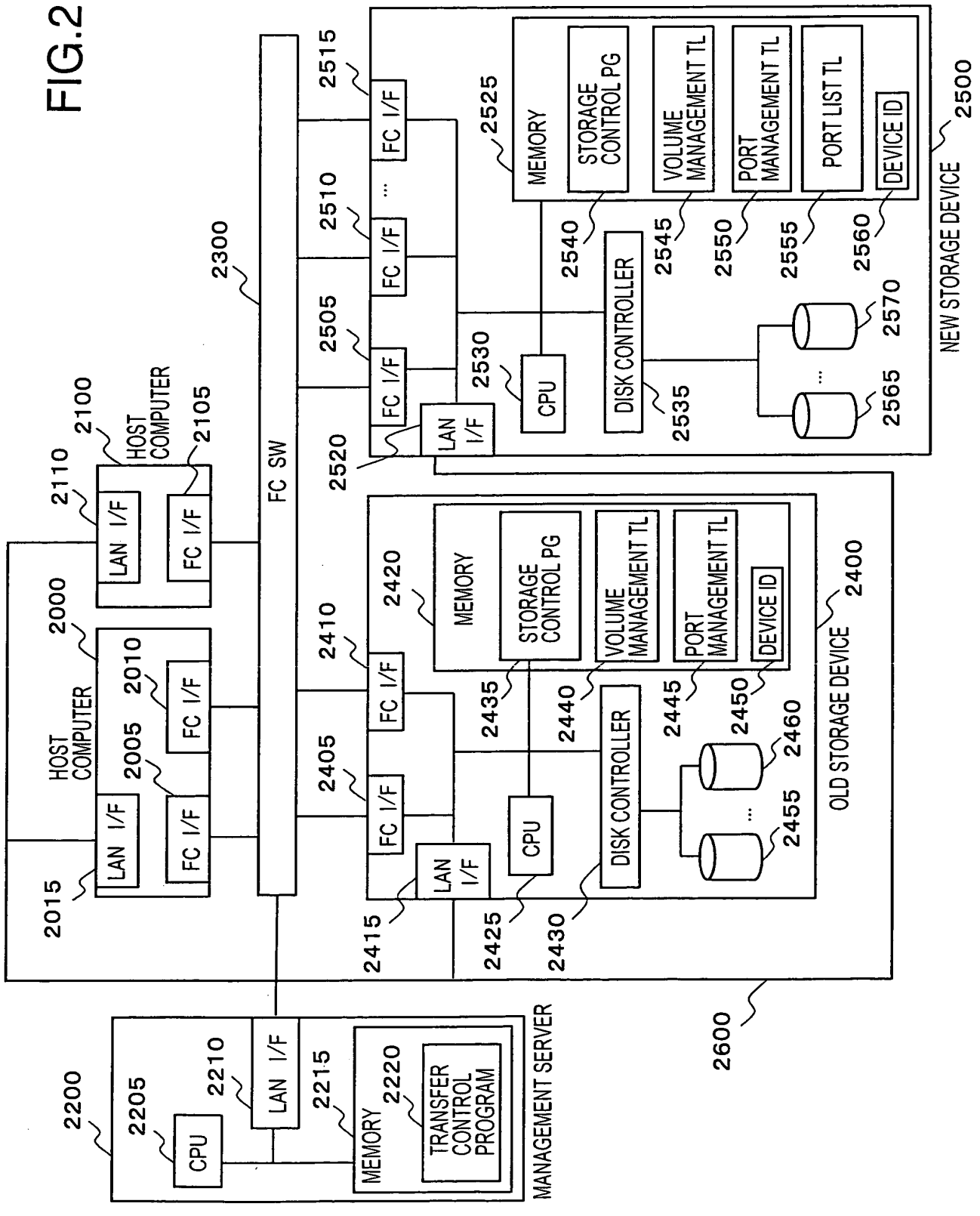

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FIG.3

VOLUME MANAGEMENT TL 2440

244005 VOLUME NUMBER	244010 VOLUME ID
1	Vol .1
2	Vol .2
3	Vol .3
4	Vol .4
:	:

FIG.4

PORT MANAGEMENT TL 2445

244505 PORT WWN	244510 LUN	244515 VOLUME ID	244520 ACCESS RESTRICTION	244525 ACCESS PERMISSION WWN
S1a	0	Vol .1	YES	H1a
	1	Vol .2	YES	H1b, H2
S1b	0	Vol .3	YES	H1a, H2
	1	Vol .1	YES	H1b
	2	Vol .4	YES	H1a, H2
:	:	:	:	:

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FIG.5

PORT LIST TL 2555

255505	255510	255515
PORT WWN	TYPE	TARGET PORT PATH DEFINITION
S2a	TARGET	YES
S2b	TARGET	YES
S2c	TARGET	NO
S2d	TARGET	NO
S2e	INITIATOR	–
S2f	INITIATOR	–
S2g	INITIATOR	–
:	:	:

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FIG.6

VOLUME MANAGEMENT TL 2545

254505 VOLUME NUMBER	254510 VOLUME ID	254515 TYPE	254520 INITIATOR PORT WWN	254525 EXTERNAL PORT WWN	254530 EXTERNAL CONNECTION LUN	254535 EXTERNAL DEVICE ID	254540 EXTERNAL VOLUME ID
1	Vol .1'	INTERNAL	–	–	–	–	–
:	:	:	:	:	:	:	:
N	Vol .N'	INTERNAL	–	–	–	–	–
N+1	Vol . N+1'	EXTERNAL	S2e	S1a	0	Storage1	Vol .1
			S2f	S1b	1		
N+2	Vol .N+2'	EXTERNAL	S2e	S1a	1	Storage1	Vol .2
N+3	Vol .N+3'	EXTERNAL	S2f	S1b	0	Stortage1	Vol .3
N+4	Vol .N+4'	EXTERNAL	S2f	S1b	2	Storage1	Vol .4
:	:	:	:	:	:	:	:

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FIG.7

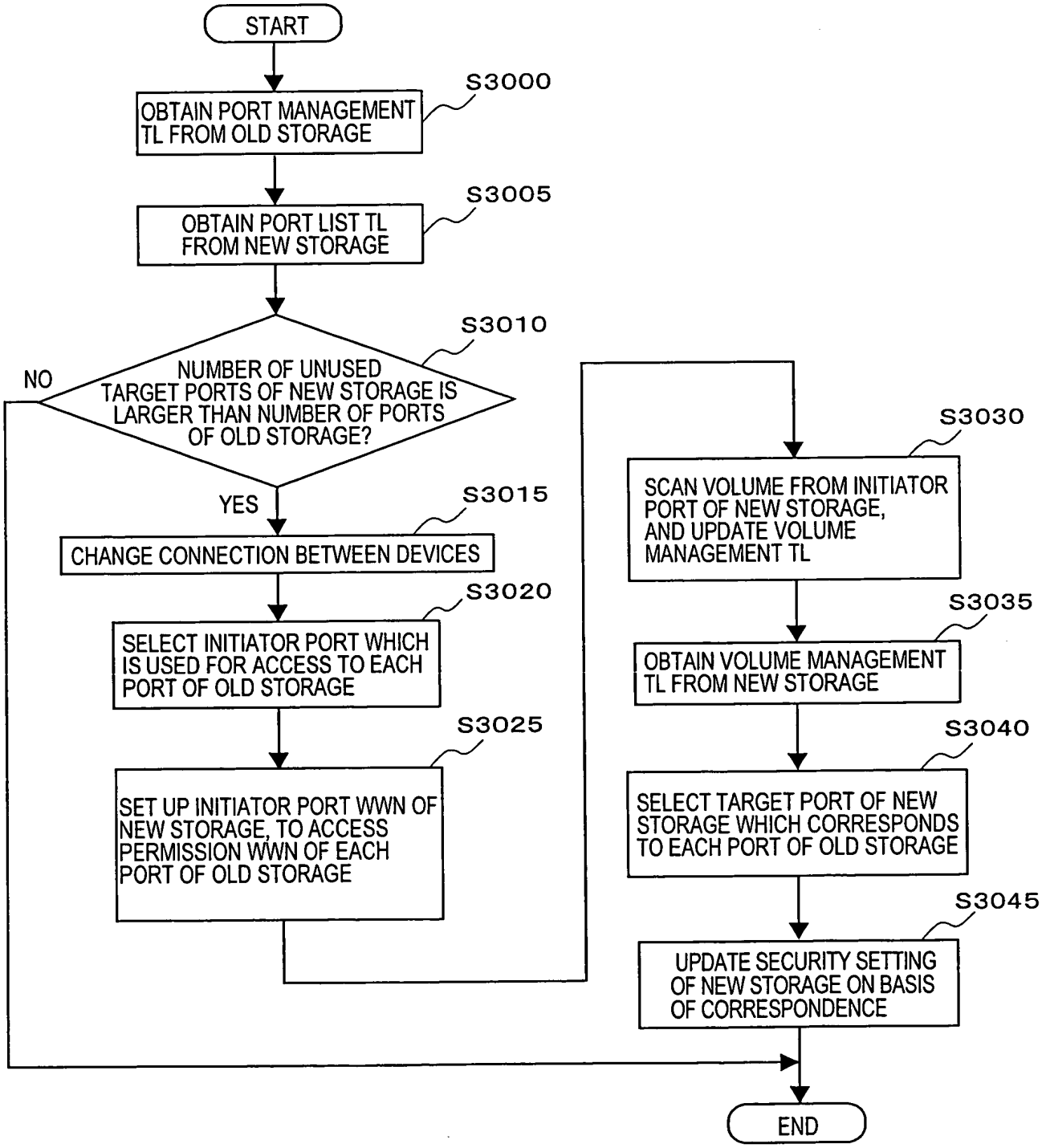

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FIG.8

CONNECTION CORRESPONDENCE TL 575

4000 INITIATOR PORT WWN	4005 EXTERNAL PORT WWN	4010 EXTERNAL CONNECTION LUN	4015 EXTERNAL DEVICE ID	4020 EXTERNAL VOLUME ID
S2e	S1a	0	Storage1	Vol.1
	S1a	1	Storage1	Vol.2
S2f	S1b	0	Storage 1	Vol.3
	S1b	1	Storage 1	Vol.1
	S1b	2	Storage 1	Vol.4
:	:	:	:	:

FIG.9

PORT MANAGEMENT TL 2550

244505 PORT WWN	244510 LUN	244515 VOLUME ID	244520 ACCESS RESTRICTION	244525 ACCESS PERMISSION WWN
:	:	:	:	:
S2c	0	Vol.N+1'		H1a
	1	Vol.N+2'		H1b, H2
S2d	0	Vol.N+3'		H1a, H2
	1	Vol.N+1'		H1b
	2	Vol.N+4'		H1a, H2
:	:	:	:	:

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FIG.10

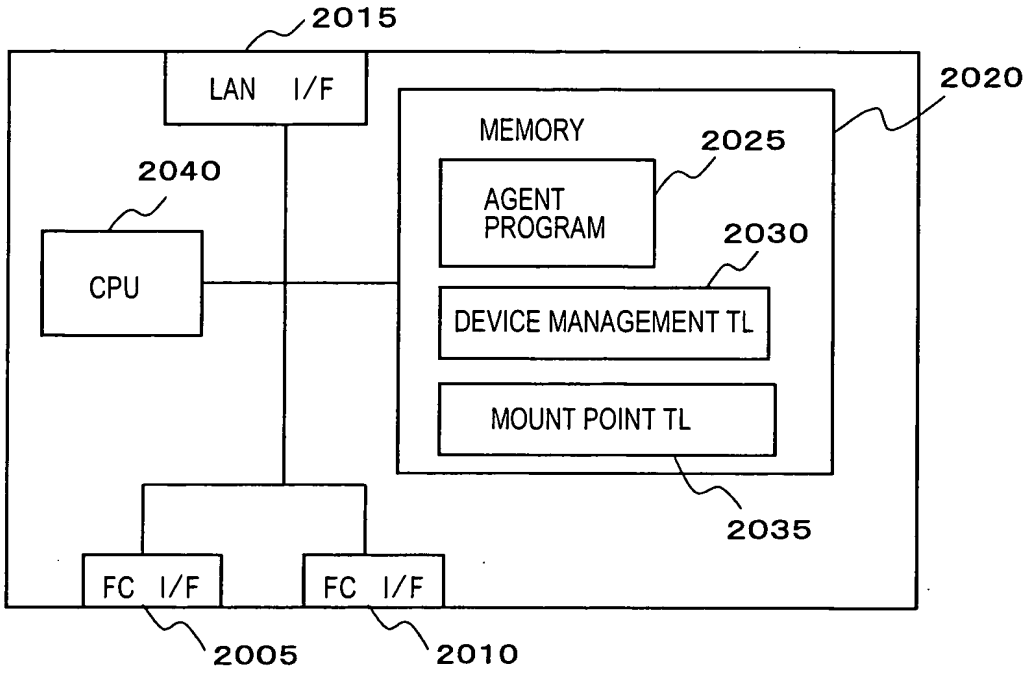

FIG.11

DEVICE MANAGEMENT TL 2030

203005 HOST WWN	203010 STORAGE WWN	203015 LUN	203020 DEVICE FILE
H1a	S1a	0	/dev/dsk/c0t0d0
	S1b	0	/dev/dsk/c0t1d0
H1b	S1a	1	/dev/dsk/c1t0d1
	S1b	1	/dev/dsk/c1t1d1
:	:	:	:

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FIG.12

MOUNT POINT TL 2035

203505 DEVICE FILE	203510 MOUNT POINT
/dev /dsk /c0t0d0	/usr /bin
/dev /dsk /c0t1d0	/usr /share
:	:

FIG.13

PORT MANAGEMENT TL 2550

244505 PORT WWN	244525 ACCESS PERMISSION WWN	244520 ACCESS RESTRICTION	244510 LUN	244515 VOLUME ID
S2a	Hx	YES	0	Vol.X
	Hy	YES	0	Vol.Y
:	:	:	:	:
S2c	H1a	YES	0	Vol.N+1'
	H1b, H2	YES	1	Vol.N+2'
S2d	H1a, H2	YES	0	Vol.N+3'
			2	Vol.N+4'
	H1b	YES	1	Vol.N+1'
:	:	:	:	:

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FIG.14

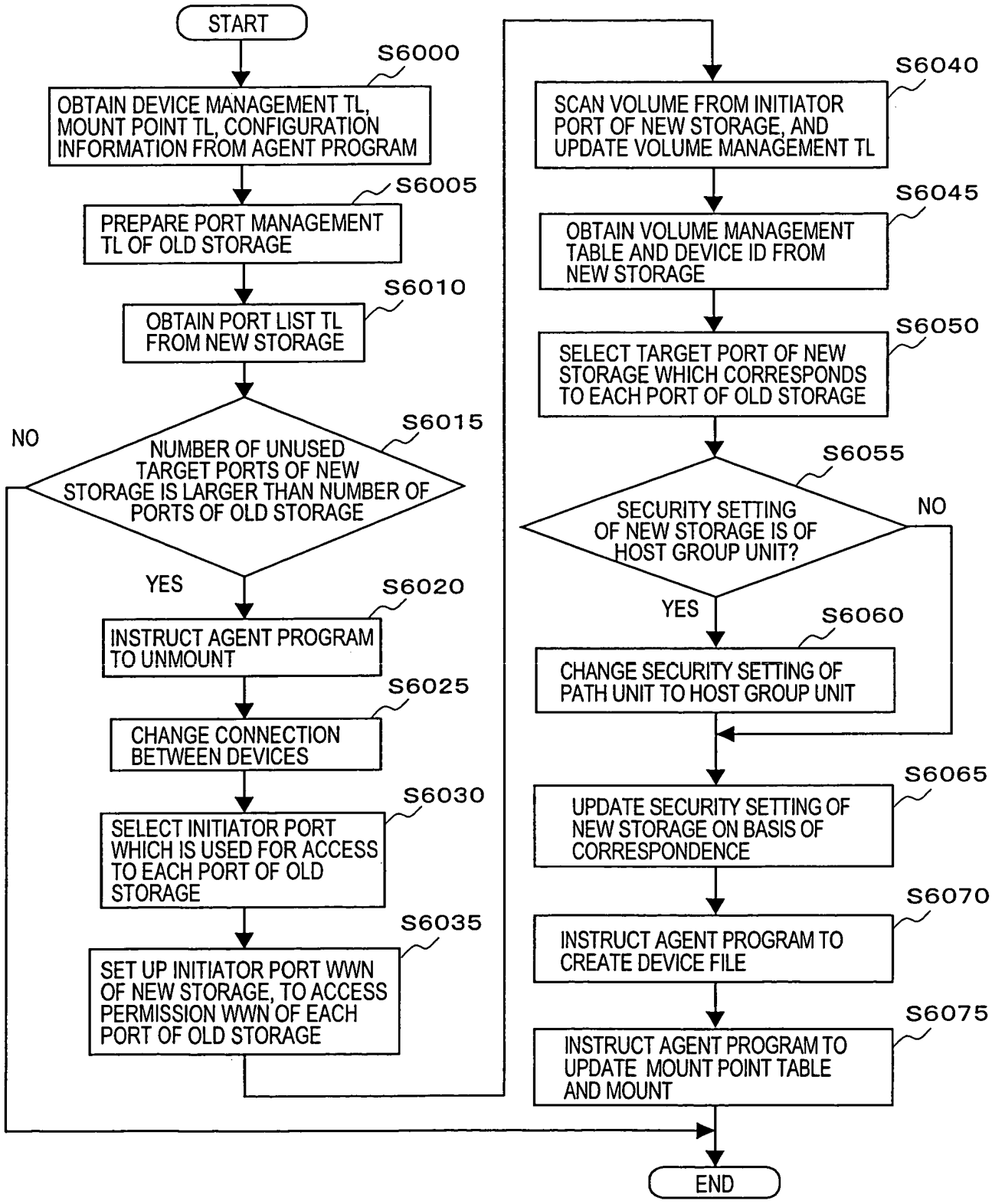

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FIG.15

CONFIGURATION INFORMATION TL 5000

500005 HOST WWN	500010 STORAGE WWN	500015 LUN	500020 DEVICE ID	500025 VOLUME ID
H1a	S1a	0	Storage1	Vol .1
	S1b	0	Storage1	Vol .3
	S1b	2	Storage1	Vol .4
H1b	S1a	1	Storage1	Vol .2
	S1b	1	Storage1	Vol .1
H2	S1a	1	Storage1	Vol .2
	S1b	0	Storage1	Vol .3
	S1b	2	Storage1	Vol .4
:	:	:	:	:

FIG.16A

S1a

7000 LUN	7005 H1a	7010 H1b	7015 H2
0	O		
1		O	O

FIG.16B

S1b

7020 LUN	7025 H1a	7030 H1b	7035 H2
0	O		O
1		O	
2	O		O

FIG.17

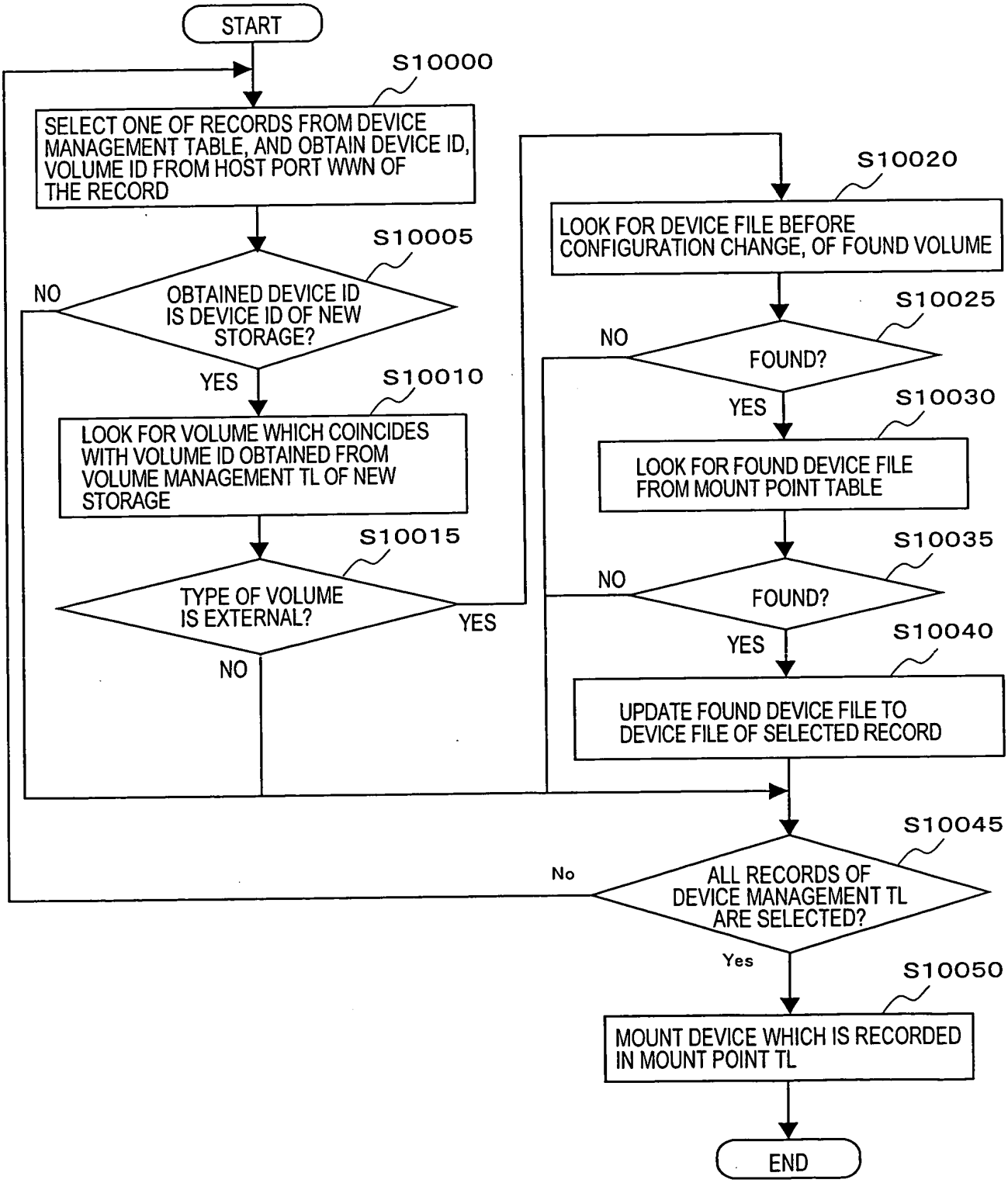

START
S10000
SELECT ONE OF RECORDS FROM DEVICE MANAGEMENT TABLE, AND OBTAIN DEVICE ID, VOLUME ID FROM HOST PORT WWN OF THE RECORD
S10005
OBTAINED DEVICE ID IS DEVICE ID OF NEW STORAGE?
NO
YES
S10010
LOOK FOR VOLUME WHICH COINCIDES WITH VOLUME ID OBTAINED FROM VOLUME MANAGEMENT TL OF NEW STORAGE
S10015
TYPE OF VOLUME IS EXTERNAL?
YES
NO
S10020
LOOK FOR DEVICE FILE BEFORE CONFIGURATION CHANGE, OF FOUND VOLUME
S10025
FOUND?
NO
YES
S10030
LOOK FOR FOUND DEVICE FILE FROM MOUNT POINT TABLE
S10035
FOUND?
NO
YES
S10040
UPDATE FOUND DEVICE FILE TO DEVICE FILE OF SELECTED RECORD
S10045
ALL RECORDS OF DEVICE MANAGEMENT TL ARE SELECTED?
No
Yes
S10050
MOUNT DEVICE WHICH IS RECORDED IN MOUNT POINT TL
END

FIG.18

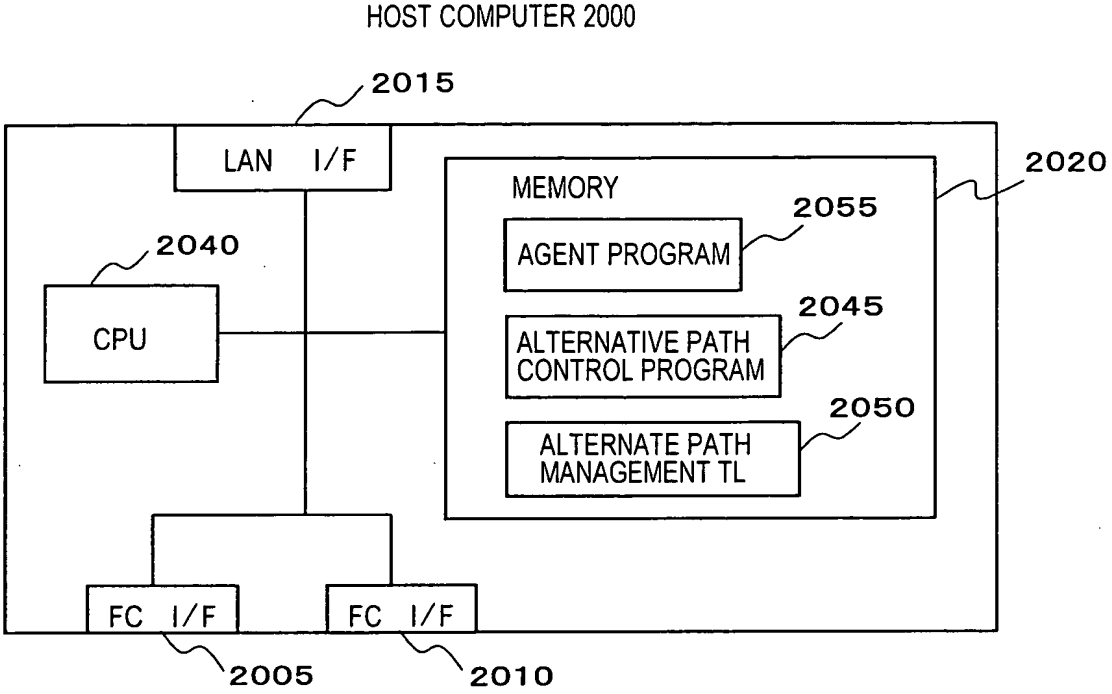
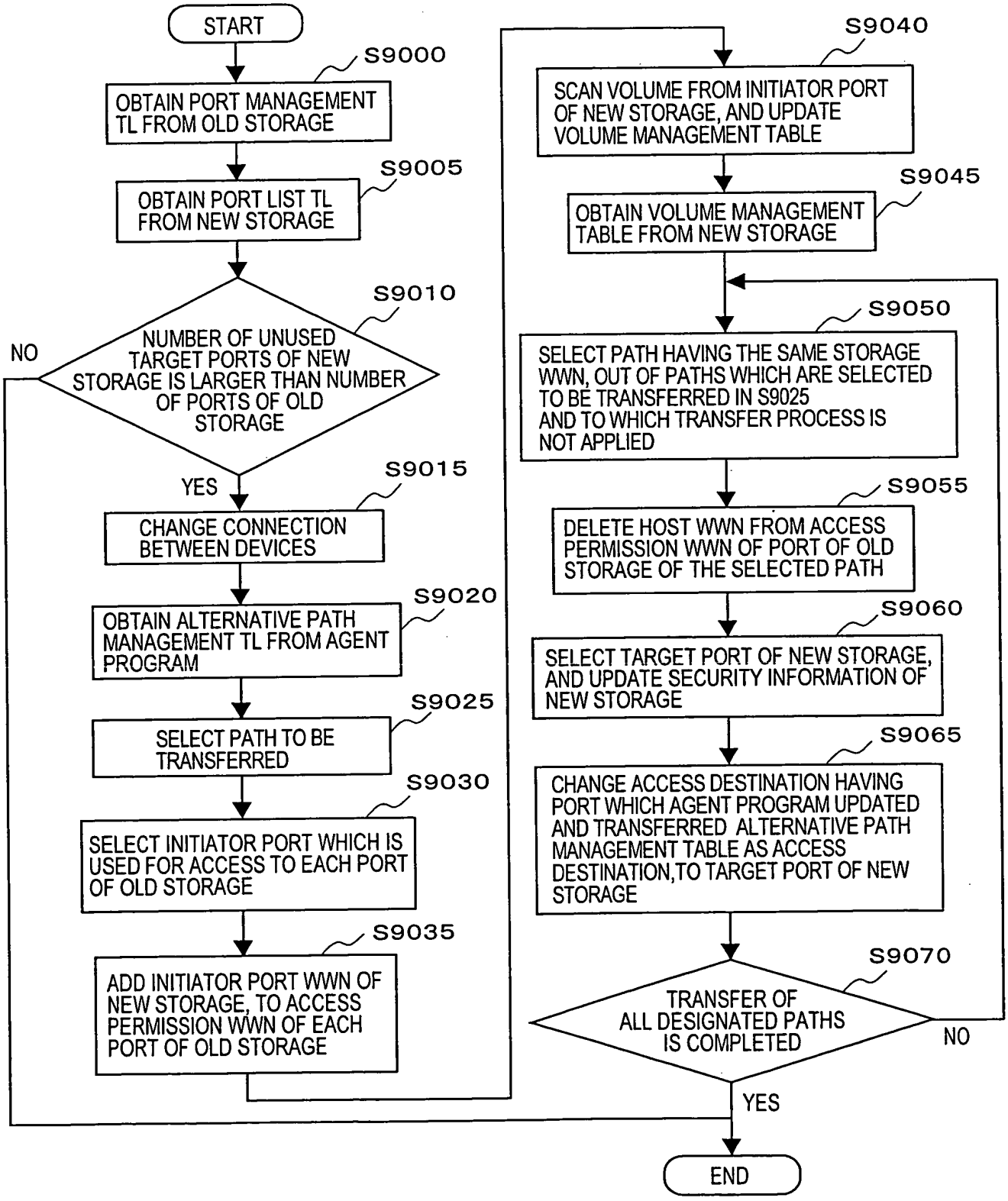


FIG.19

ALTERNATE PATH MANAGEMENT TL 2050

205005 PATH NUMBER	205010 HOST WWN	205015 STORAGE WWN	205020 LUN	205025 ALTERNATIVE PATH NUMBER
1	H1a	S1a	0	2
2	H1b	S1b	1	1
:	:	:	:	:

FIG.20


START
S9000
OBTAIN PORT MANAGEMENT TL FROM OLD STORAGE
S9005
OBTAIN PORT LIST TL FROM NEW STORAGE
S9010
NUMBER OF UNUSED TARGET PORTS OF NEW STORAGE IS LARGER THAN NUMBER OF PORTS OF OLD STORAGE
NO
YES
S9015
CHANGE CONNECTION BETWEEN DEVICES
S9020
OBTAIN ALTERNATIVE PATH MANAGEMENT TL FROM AGENT PROGRAM
S9025
SELECT PATH TO BE TRANSFERRED
S9030
SELECT INITIATOR PORT WHICH IS USED FOR ACCESS TO EACH PORT OF OLD STORAGE
S9035
ADD INITIATOR PORT WWN OF NEW STORAGE, TO ACCESS PERMISSION WWN OF EACH PORT OF OLD STORAGE
S9040
SCAN VOLUME FROM INITIATOR PORT OF NEW STORAGE, AND UPDATE VOLUME MANAGEMENT TABLE
S9045
OBTAIN VOLUME MANAGEMENT TABLE FROM NEW STORAGE
S9050
SELECT PATH HAVING THE SAME STORAGE WWN, OUT OF PATHS WHICH ARE SELECTED TO BE TRANSFERRED IN S9025 AND TO WHICH TRANSFER PROCESS IS NOT APPLIED
S9055
DELETE HOST WWN FROM ACCESS PERMISSION WWN OF PORT OF OLD STORAGE OF THE SELECTED PATH
S9060
SELECT TARGET PORT OF NEW STORAGE, AND UPDATE SECURITY INFORMATION OF NEW STORAGE
S9065
CHANGE ACCESS DESTINATION HAVING PORT WHICH AGENT PROGRAM UPDATED AND TRANSFERRED ALTERNATIVE PATH MANAGEMENT TABLE AS ACCESS DESTINATION,TO TARGET PORT OF NEW STORAGE
S9070
TRANSFER OF ALL DESIGNATED PATHS IS COMPLETED
NO
YES
END